

**REMARKS**

Claims 1 – 11 and 13 - 19 are pending in the present application, of which claims 6, 7, 9, 10, 11 and 15 have been withdrawn from consideration. By this Amendment, claim 1 has been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated March 5, 2004.

**As To The Merits:**

As to the merits of this case, the Examiner sets forth the following rejections:

1) claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vinn et al. USP 4,717,888 (Vinn) in view of Shaw USP 2,787,560 (Shaw) and Millman;

2) claims 1-5, 8, and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Holt page 384 of Electronic Circuits” (Holt) in view of Vinn et al. USP 4,717,888 (Vinn), Millman and Shaw USP 2,787,560 (Shaw); and

3) claims 13 and 16-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Holt page 384 of electronic Circuits” (Holt) in view of Vinn et al. USP 4,717,888 (Vinn), Millman and Shaw as applied to claims 1-5, 8, and 14 above, and further in view of Campbell et al. USP 5,546,033 (Campbell).

Each of these rejections is respectfully traversed.

Claim 1, as amended, now calls for *wherein said one or plurality of thin film resistors have a thickness smaller than three times its skin depth at a predetermined frequency in the range of 1 GHz to 10 GHz.*

This amendment is based on the grounds that the effect of the present limitation, i.e., the improvement of the reduced gain in a high frequency region is notable exhibited in the range of “ $10^9$  Hz to  $10^{10}$  Hz” on the abscissa axis of Fig. 2 or 3, specifically around greater than  $10^9$  in Fig. 3.

Shaw (U.S. Patent No. 2,787,560) discloses that “in order for metal film resistors to be fully useful for microwave work it is necessary that the film be a relatively small fraction of the skin depth for such wavelength.” However, this discloses merely indicates that the film thickness is very thin as compared to the skin depth. Shaw fails to disclose the subject matter of the present invention utilizing such a characteristic that the resistance value of a metal film resistor having a certain film thickness is changed with respect to a frequency by a skin effect.

More specifically, it is respectfully submitted Shaw fails to disclose or fairly suggest the features of claim 1, as amended, concerning *said one or plurality of thin film resistors have a thickness smaller than three times its skin depth at a predetermined frequency in the range of 1 GHz to 10 GHz.*

Response under 37 C.F.R. §1.111  
Attorney Docket No. **010377**  
Serial No. **09/813,303**

Moreover, it is respectfully submitted that Millman fails to teach the above-noted drawbacks and deficiencies of Shaw with regard to these features of claim 1.

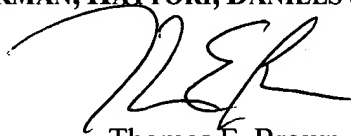
In view of the aforementioned amendments and accompanying remarks, Applicants submits that that the claims, as herein amended, are not anticipated or obvious over the cited references, and therefore the application is in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**



Thomas E. Brown  
Attorney for Applicants  
Registration No. 44,450

TEB/jnj  
1250 Connecticut Avenue, NW  
Suite 700  
Washington, D.C. 20036  
(202) 822-1100 (t)  
(202) 822-1111 (f)